

REMARKS

Below, the applicant's comments are preceded by related remarks of the examiner set forth in small bold font.

Claim Rejections - 35 USC §103

2. Claims 1-4, 6, 7, 9-I, 13, 15, 16, 18, 19, 24, and 26-33 are rejected under 35 U. S. C. 103(a) as being unpatentable over Cam et al. (USOO6671758B1), hereafter Cam, in view of Bucholz et al. (US005440545A) hereafter Bucholz.

In regards to Claims 1, 2, 4, 6, 9, 10, 13, 15, 16, 18, 19, 24, 26-28, and 32, Cam discloses a packet data transfer method on an interface having a large number of ports (Abstract; claim 1, 9, 24 -intra-packet switching) ... Cam also does not explicitly show storing a data element concerning the first available packet...

Bucholz discloses a packet delivery system in which packets are fragmented for transmission (Title; Abstract). Referring to Fig. 6, Bucholz shows that a reassembly header (stored data element) is stored in the fragmented packet indicating its place within the packet, total packet length, total fragments, etc. such that it can be determined when the packet is fully fragmented (Col. 6-7, lines 63-23; claim 1, 4, 9, 24, ...). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Cam by storing a reassembly header for the packet currently being processed, including information regarding how much of the packet has been fragmented and how much remains, so that subsequent processing of the remainder of the packet fragments can be performed, as taught by Bucholz. This would enable the transmission system to recognize when a complete packet has been processed when transmitted in a number of fragments.

The examiner provides the following additional comments regarding claim 1 in response to the Applicant's remarks filed July 19, 2005.

In the Remarks on pgs. 13-14 of the Amendment, Applicant contends that the combination of Cam and Bucholz does not disclose or suggest "storing at least one data element concerning the first available data packet, wherein the data element enables subsequent fragmenting of a second portion of the first available packet" as recited in the Applicant's claims. In particular, Applicant contends that the reassembly header 430 of Bucholz cannot be equivalent to the "data element" of the claims because the header simply provides information for re-assembling packet fragments and does not provide information to allow for subsequent fragmenting of a second portion of the data packet.

The Examiner respectfully disagrees. The reassembly header 430 disclosed by Bucholz does provide information for re-assembling packet fragments

of a packet, as stated by the Applicant. However, as shown in Fig. 4, the reassembly header 430 is included in a transmission packet that only contains one fragment of a particular packet, not all of the packet fragments. The information contained within the reassembly header of the first packet fragment, would therefore enable subsequent fragmenting and reception of the remainder of the packet by keeping track of the packet's fragmentation progress to that point in time. Reference to Fig. 2 and lines 44-55 of column 2 in Bucholz further demonstrates this, by showing that control information is generated for each fragment of a packet rather than generating one set of control information for all the fragments of a particular packet. The control information of each fragment enables the subsequent fragmentation of the packet data that remains.

The examiner provides the following additional comments regarding claim 1 in response to the Applicant's remarks filed November 7, 2005.

Applicant contends that the rejections are improper because the disclosure of Bucholz does not show fragmenting a portion of a second packet subsequent to fragmenting a portion of a first packet but prior to fragmenting all of the first packet. However, the Examiner has relied upon Bucholz to show the use of a reassembly header (stored data element) during the fragmentation process. Cam is shown to disclose fragmenting of a portion of a second packet subsequent to fragmenting a portion of a first packet but prior to fragmenting all of the first packet, as shown in the rejection. The combination of Bucholz' stored data element with the fragmentation of Cam would improve the management of large packet fragmentation and processing efficiency in Cam.

The applicant has amended claim 1 to make clear that the data element is indicative of the incomplete fragmentation status of the first available data packet and that the data element enables subsequent fragmenting of a second portion of the first available data packet subsequent to fragmenting at least a portion of a second available data packet.

As the examiner apparently acknowledges, Cam does not disclose or suggest storing a data element that enables fragmenting of a second portion of a first available data packet subsequent to fragmenting at least a portion of a second available data packet.

Bucholz' reassembly header, to which the examiner refers, simply provides information for re-assembling packet fragments. Unlike the applicant's data element, the reassembly header 430 does not provide information to enable fragmenting of a second portion of the data packet subsequent to fragmenting at

least a portion of a second available data packet.

In addition, Bucholz fragments the entire packet consecutively. (col. 8, lines 9-13). The examiner fails to point out a single portion of the reference which states how the information in the reassembly header 430 enables fragmenting of second portion of a first available data packet subsequent to fragmenting at least a portion of a second available data packet.

Therefore, Bucholz's reassembly header 430 cannot be an example of the applicant's "data element" because Bucholz's reassembly header 430 does not enable "fragmenting of a second portion of the first available data packet subsequent to fragmenting at least a portion of a second available data packet" as recited in the applicant's claim 1.

Furthermore, because Bucholz' reassembly header provides information for re-assembling packet fragments after receipt by a receiving device, Bucholz's reassembly header 430 does not include a data element indicative of the incomplete fragmentation status of said first available data packet.

Claims 9, 21, and 24 all recite "a packet information storage process for storing at least one data element concerning the first data packet, wherein said data element enables fragmenting of a second portion of the first data packet subsequent to fragmenting at least a portion of a second available data packet" and are patentable for at least reasons similar to claim 1.

Claims 29 and 32 recite "storing at least one data element concerning the first available data packet, wherein the data element enables fragmenting of a second portion of the first available data packet subsequent to fragmenting at least a portion of a second available data packet" and are patentable for at least reasons similar to claim 1.

Claims 2, 4, 6, 10, 12-13, 15-16, 18-19, and 26-28 are patentable for at least the reasons the claims on which they depend are patentable.

In regards to Claims 3 and 11 ...

In regards to Claim 7 ...

In regards to Claims 29-31 and 33 ...

In regards to Claims 5, 8, 14, and 17 ...

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In regards to Claims 20-22 and 34 ...
In regards to Claim 23 ...
In regards to Claim 25 ...

Claims 3, 5, 7-8, 11, 14, 17, 20, 22-23, 25, 30-31, and 33-34 are patentable
for at least the reasons the claims on which they depend are patentable.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

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